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DATE: Monday, April 11, 2005

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*DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ*

<input type="checkbox"/>	L3	2001	3
<input type="checkbox"/>	L2	L1 same (expression or array or microarray)	22
<input type="checkbox"/>	L1	(logistic regression or discriminant) same principal component analysis	296

END OF SEARCH HISTORY

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FILE 'HOME' ENTERED AT 16:31:01 ON 11 APR 2021

=> file .pub

SINCE FILE TOTAL  
ENTRY SESSION  
0 21 0 21

FILE 'MEDLINE' ENTERED AT 16:21:18 ON 11 APR 2005

FILE 'BIOSIS' ENTERED AT 16:21:19 ON 11 APR 2005  
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=> s (logistic regression or discriminant)
L1      92800 (LOGISTIC REGRESSION OR DISCRIMINANT)
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=> s 11 and (principal component analysis)  
L2 1435 L1 AND (PRINCIPAL COMPONENT ANALYSIS)

=> s 12 and py<2001  
L3 915 L2 AND PY<2001

=> s 12 and logistic regression  
L4 117 L2 AND LOGISTIC REGRESSION

=> s 14 and review/dt  
L5 1 L4 AND REVIEW/DT

=> d bib ab

L5 ANSWER 1 OF 1 MEDLINE on STN  
AN 97378809 MEDLINE  
DN PubMed ID: 9234406  
TI An overview of techniques for dealing with large numbers of independent variables in epidemiologic studies.  
AU Dohoo I R; Ducrot C; Fourichon C; Donald A; Hurnik D  
CS Department of Health Management, Atlantic Veterinary College, University of P.E.I., Charlottetown, Canada.  
SO Preventive veterinary medicine, (1997 Jan) 29 (3) 221-39. Ref: 24  
Journal code: 8217463. ISSN: 0167-5877.  
CY Netherlands  
DT Journal; Article; (JOURNAL ARTICLE)  
\*\*\*General Review; (REVIEW)\*\*\*  
(REVIEW, TUTORIAL)  
LA English  
FS Priority Journals  
EM 199709  
ED Entered STN: 19970916  
Last Updated on STN: 19970916  
Entered Medline: 19970902  
AB Many studies of health and production problems in livestock involve the simultaneous evaluation of large numbers of risk factors. These analyses may be complicated by a number of problems including: multicollinearity (which arises because many of the risk factors may be related (correlated) to each other), confounding, interaction, problems related to sample size (and hence the power of the study), and the fact that many associations are evaluated from a single dataset. This paper focuses primarily on the problem of multicollinearity and discusses a number of techniques for dealing with this problem. However, some of the techniques discussed may also help to deal with the other problems identified above. The first general approach to dealing with multicollinearity involves reducing the number of independent variables prior to investigating associations with the disease. Techniques to accomplish this include: (1) excluding variables after screening for associations among independent variables; (2) creating indices or scores which combine data from multiple factors into a single variable; (3) creating a smaller set of independent variables through the use of multivariable techniques such as  
\*\*\*principal\*\*\* \*\*\*components\*\*\* \*\*\*analysis\*\*\* or factor analysis. The second general approach is to use appropriate steps and statistical techniques to investigate associations between the independent variables and the dependent variable. A preliminary screening of these associations may be performed using simple statistical tests. Subsequently, multivariable techniques such as linear or \*\*\*logistic\*\*\* \*\*\*regression\*\*\* or correspondence analysis can be used to identify important associations. The strengths and limitations of these techniques are discussed and the techniques are demonstrated using a dataset from a recent study of risk factors for pneumonia in swine. Emphasis is placed on comparing correspondence analysis with other techniques as it has been used less in the epidemiology literature.

=> s 14 and (expression or array or microarray)  
L6 6 L4 AND (EXPRESSION OR ARRAY OR MICROARRAY)

=> duplicate remove 16  
DUPLICATE PREFERENCE IS 'MEDLINE, BIOSIS'  
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n  
PROCESSING COMPLETED FOR L6  
L7 4 DUPLICATE REMOVE L6 (2 DUPLICATES REMOVED)

=> d 1-4 bib ab

L7 ANSWER 1 OF 4 MEDLINE on STN  
AN 2004168980 MEDLINE DUPLICATE 1

DN PubMed ID: 15064153  
TI Structural changes in gill DNA reveal the effects of contaminants on Puget Sound fish.  
AU Malins Donald C; Stegeman John J; Anderson Jack W; Johnson Paul M; Gold Jordan; Anderson Katie M  
CS Biochemical Oncology Program, Pacific Northwest Research Institute, 720 Broadway, Seattle, WA 98122, USA.. dmalins@pnri.org  
NC 5P42 ES 07381 (NIEHS)  
P42 ES 04696 (NIEHS)  
SO Environmental health perspectives, (2004 Apr) 112 (5) 511-5.  
Journal code: 0330411. ISSN: 0091-6765.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 200411  
ED Entered STN: 20040406  
Last Updated on STN: 20041111  
Entered Medline: 20041110  
AB Structural differences were identified in gill DNA from two groups of English sole collected from Puget Sound, Washington, in October 2000. One group was from the industrialized Duwamish River (DR) in Seattle and the other from relatively clean Quartermaster Harbor (QMH). Chemical markers of sediment contamination [e.g., polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs)] established that the DR was substantially more contaminated than QMH. The levels of these chemicals in the sediments of both sites were consistent with levels of cytochrome P450 1A (CYP1A) \*\*\*expression\*\*\* in the gills of English sole from the same sites. Structural differences in gill DNA between the groups were evinced via statistical models of Fourier transform-infrared (FT-IR) spectra. Marked structural damage was found in the gill DNA of the DR fish as reflected in differences in base functional groups (e.g., C-O and NH2) and conformational properties (e.g., arising from perturbations in vertical base stacking interactions). These DNA differences were used to discriminate between the two fish groups through \*\*\*principal\*\*\* \*\*\*components\*\*\* \*\*\*analysis\*\*\* of mean FT-IR spectra. In addition, \*\*\*logistic\*\*\* \*\*\*regression\*\*\* analysis allowed for the development of a "DNA damage index" to assess the effects of contaminants on the gill. The evidence implies that environmental chemicals contribute to the DNA changes in the gill. The damaged DNA is a promising marker for identifying, through gill biopsies, contaminant effects on fish.

L7 ANSWER 2 OF 4 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 2005:42538 BIOSIS  
DN PREV200500045283  
TI Research on machine learning issues in biomedical informatics modeling.  
AU Ohno-Machado, Lucila [Reprint Author]  
CS Decis Syst Grp, Brigham and Womens Hosp, Boston, MA, 02115, USA  
machado@dsg.harvard.edu  
SO Journal of Biomedical Informatics, (August 2004) Vol. 37, No. 4, pp. 221-223. print.  
ISSN: 1532-0464 (ISSN print).  
DT Article  
Editorial  
LA English  
ED Entered STN: 26 Jan 2005  
Last Updated on STN: 26 Jan 2005

L7 ANSWER 3 OF 4 MEDLINE on STN  
AN 2004232433 MEDLINE  
DN PubMed ID: 15130433  
TI Relationship of occupational injuries with social and economic factors.  
AU Liu Xin-rong; Yang Jian-guo; Jiang Wen-zhong; Shen Jun; Wu Chang; Xia Zhao-lin  
CS Taizhou Center for Disease Control and Prevention, Taizhou, Jiangsu Province 225300, China.  
SO Zhonghua Lao Dong Wei Sheng Zhi Ye Bing Za Zhi, (2004 Apr) 22 (2) 86-9.  
Journal code: 8410840. ISSN: 1001-9391.  
CY China  
DT Journal; Article; (JOURNAL ARTICLE)  
LA Chinese  
FS Priority Journals  
EM 200408  
ED Entered STN: 20040510  
Last Updated on STN: 20040813

AB Entered Medline: 20040812  
OBJECTIVE: To explore the relationship of occupational injuries with social and economic factors in chemical industry during 2000.01 - 2001.12.  
METHOD: 1:2 paired case-control study, univariable \*\*\*logistic\*\*\* \*\*\*regression\*\*\* analysis, \*\*\*principal\*\*\* \*\*\*component\*\*\* \*\*\*analysis\*\*\*, and multiple \*\*\*logistic\*\*\* \*\*\*regression\*\*\* analysis were used in this study. RESULTS: Univariable analysis showed that occupational injuries had significant relationship with age, sex, education, employment pattern, technology, workplace, work changing, wage, family income, enterprise scale, enterprise proprietorship, projective device, operation rules, and training rules of work safety. The extracted four principal components (PC(1), PC(2), PC(3) and PC(4), ranked by contribution) gave good \*\*\*expressions\*\*\* to the initial 11 variables. The cumulative proportion of the four principal components reached 77.36%. PC(1) was the indicative factor of occupational injuries, which represented 46.69% information of initial variables. PC(2) was the kinetic factor of occupational injuries. PC(3) was the stable factor of occupational injuries. PC(4) was the sex factor of occupational injuries. The results of multiple conditional \*\*\*logistic\*\*\* \*\*\*regression\*\*\* analysis showed that occupational injuries had statistically significant relationship with PC(1) and PC(2). Among the initial variables, sex, employment pattern, income, scale of enterprise, and property of enterprise were more prominent. CONCLUSION: Occupational injuries are related with multiple social and economic factors, which often interact on each other. The prevention and control of occupational injuries should require a comprehensive approach, including training and education of work safety, improving workers' consciousness of self-protection, and enhancing proprietors' consciousness of work safety.

L7 ANSWER 4 OF 4 MEDLINE on STN  
AN 1999005592 MEDLINE  
DN PubMed ID: 9789163  
TI Dimensions of anger and CHD in men and women: self-ratings versus spouse ratings.  
AU Siegman A W; Townsend S T; Blumenthal R S; Sorkin J D; Civelek A C  
CS Department of Psychology, University of Maryland, Baltimore 21250, USA.  
SO Journal of behavioral medicine, (1998 Aug) 21 (4) 315-36.  
Journal code: 7807105. ISSN: 0160-7715.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 199901  
ED Entered STN: 19990209  
Last Updated on STN: 19990209  
Entered Medline: 19990126  
AB One hundred one males and 95 females referred for thallium stress testing were administered Spielberger's State-Trait Anger \*\*\*Expression\*\*\* Inventory (STAXI), the Ho scale cynicism items, the Cynical Beliefs Scale, and Bendig's Manifest Anxiety Scale. A subset of 53 males and 43 females was rated by their spouses by means of STAXI. Based on the thallium findings and their medical history, patients were classified either as healthy, or as having documented CHD, or as questionable. Patients' STAXI and cynicism measures were submitted to a \*\*\*principal\*\*\* - \*\*\*components\*\*\* \*\*\*analysis\*\*\* which yielded three factors: Impulsive Anger-out. Inwardly experienced anger, and Cynicism. The relationships between factor scores and documented CHD was determined by means of \*\*\*logistic\*\*\* \*\*\*regression\*\*\* analyses. Only Impulsive Anger-out correlated (positively) with CHD, but only when based on spouses' ratings and only in males ( $p < .01$ , RR = 3.13). Covarying traditional risk factors and cynicism did not attenuate this relationship. However, a significant relationship between Ho scale cynicism and CHD did not survive adjustment for traditional risk factors. Anxiety was not a risk factor for CHD.

=> d his

(FILE 'HOME' ENTERED AT 16:21:01 ON 11 APR 2005)

FILE 'MEDLINE, BIOSIS' ENTERED AT 16:21:19 ON 11 APR 2005  
92800 S (LOGISTIC REGRESSION OR DISCRIMINANT)  
1435 S L1 AND (PRINCIPAL COMPONENT ANALYSIS)  
915 S L2 AND PY<2001  
117 S L2 AND LOGISTIC REGRESSION

L5 1 S L4 AND REVIEW/DT  
L6 6 S L4 AND (EXPRESSION OR ARRAY OR MICROARRAY)  
L7 4 DUPLICATE REMOVE L6 (2 DUPLICATES REMOVED)

=> s duplicate remove 13  
MISSING OPERATOR REMOVE L3

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nested terms that are not separated by a logical operator.

=> duplicate remove 13  
DUPLICATE PREFERENCE IS 'MEDLINE, BIOSIS'  
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n  
PROCESSING COMPLETED FOR L3  
L8 780 DUPLICATE REMOVE L3 (135 DUPLICATES REMOVED)

=> s 18 and review/dt  
L9 4 L8 AND REVIEW/DT

=> d 1-4 bib ab

L9 ANSWER 1 OF 4 MEDLINE on STN  
AN 1998384074 MEDLINE  
DN PubMed ID: 9719569  
TI From magnetic resonance spectroscopy to classification of tumors. A review  
of pattern recognition methods.  
AU Hagberg G  
CS Karolinska MR-Research Center, Stockholm University PET-center, Sweden.  
SO NMR in biomedicine, \*\*\* (1998 Jun-Aug) \*\*\* 11 (4-5) 148-56. Ref: 66  
Journal code: 8915233. ISSN: 0952-3480.  
CY ENGLAND: United Kingdom  
DT Journal; Article; (JOURNAL ARTICLE)  
\*\*\*General Review; (REVIEW)\*\*\*  
(REVIEW, TUTORIAL)  
LA English  
FS Priority Journals  
EM 199810  
ED Entered STN: 19981029  
Last Updated on STN: 19981029  
Entered Medline: 19981022  
AB This article reviews the wealth of different pattern recognition methods  
that have been used for magnetic resonance spectroscopy (MRS) based tumor  
classification. The methods have in common that the entire MR spectra is  
used to develop linear and non-linear classifiers. The following issues  
are addressed: (i) pre-processing, such as normalization and digitization,  
(ii) extraction of relevant spectral features by multivariate methods,  
such as \*\*\*principal\*\*\* \*\*\*component\*\*\* \*\*\*analysis\*\*\*, linear  
\*\*\*discriminant\*\*\* analysis (LDA), and optimal \*\*\*discriminant\*\*\*  
vector, and (iii) classification by LDA, cluster analysis and artificial  
neural networks. Different approaches are compared and discussed in view  
of practical and theoretical considerations.

L9 ANSWER 2 OF 4 MEDLINE on STN  
AN 97378809 MEDLINE  
DN PubMed ID: 9234406  
TI An overview of techniques for dealing with large numbers of independent  
variables in epidemiologic studies.  
AU Dohoo I R; Ducrot C; Fourichon C; Donald A; Hurnik D  
CS Department of Health Management, Atlantic Veterinary College, University  
of P.E.I., Charlottetown, Canada.  
SO Preventive veterinary medicine, \*\*\* (1997 Jan) \*\*\* 29 (3) 221-39. Ref:  
24  
Journal code: 8217463. ISSN: 0167-5877.  
CY Netherlands  
DT Journal; Article; (JOURNAL ARTICLE)  
\*\*\*General Review; (REVIEW)\*\*\*  
(REVIEW, TUTORIAL)  
LA English  
FS Priority Journals  
EM 199709  
ED Entered STN: 19970916  
Last Updated on STN: 19970916  
Entered Medline: 19970902  
AB Many studies of health and production problems in livestock involve the  
simultaneous evaluation of large numbers of risk factors. These analyses  
may be complicated by a number of problems including: multicollinearity

(which arises because many of the risk factors may be related (correlated) to each other), confounding, interaction, problems related to sample size (and hence the power of the study), and the fact that many associations are evaluated from a single dataset. This paper focuses primarily on the problem of multicollinearity and discusses a number of techniques for dealing with this problem. However, some of the techniques discussed may also help to deal with the other problems identified above. The first general approach to dealing with multicollinearity involves reducing the number of independent variables prior to investigating associations with the disease. Techniques to accomplish this include: (1) excluding variables after screening for associations among independent variables; (2) creating indices or scores which combine data from multiple factors into a single variable; (3) creating a smaller set of independent variables through the use of multivariable techniques such as \*\*\*principal\*\*\* \*\*\*components\*\*\* \*\*\*analysis\*\*\* or factor analysis. The second general approach is to use appropriate steps and statistical techniques to investigate associations between the independent variables and the dependent variable. A preliminary screening of these associations may be performed using simple statistical tests. Subsequently, multivariable techniques such as linear or \*\*\*logistic\*\*\* \*\*\*regression\*\*\* or correspondence analysis can be used to identify important associations. The strengths and limitations of these techniques are discussed and the techniques are demonstrated using a dataset from a recent study of risk factors for pneumonia in swine. Emphasis is placed on comparing correspondence analysis with other techniques as it has been used less in the epidemiology literature.

L9 ANSWER 3 OF 4 MEDLINE on STN  
 AN 93248368 MEDLINE  
 DN PubMed ID: 8483976  
 TI Factors of the Wisconsin Card Sorting Test as measures of frontal-lobe function in schizophrenia and in chronic alcoholism.  
 AU Sullivan E V; Mathalon D H; Zipursky R B; Kersteen-Tucker Z; Knight R T; Pfefferbaum A  
 CS Psychiatry Service, Palo Alto Department of Veterans Affairs Medical Center, CA 94304.  
 NC AA-05965 (NIAAA)  
 MH-30854 (NIMH)  
 NS-21135 (NINDS)  
 SO Psychiatry research, \*\*\*(1993 Feb)\*\*\* 46 (2) 175-99. Ref: 67  
 CY Journal code: 7911385. ISSN: 0165-1781.  
 DT Ireland  
 Journal; Article; (JOURNAL ARTICLE)  
 \*\*\*General Review; (REVIEW)\*\*\*  
 (REVIEW, TUTORIAL)  
 LA English  
 FS Priority Journals  
 EM 199306  
 ED Entered STN: 19930618  
 Last Updated on STN: 19970203  
 Entered Medline: 19930603  
 AB The purpose of this study was to examine the factor structure of the Wisconsin Card Sorting Test (WCST). The scores of 22 patients with schizophrenia, 20 patients with chronic alcoholism, and 16 normal control subjects were entered into a \*\*\*principal\*\*\* \*\*\*components\*\*\* \*\*\*analysis\*\*\*, which yielded three factors: Perseveration, Inefficient Sorting, and Nonperseverative Errors. WCST performance of seven patients with lesions invading the dorsolateral prefrontal cortex, available from another study, provided criterion validity for the Perseveration factor and, less strongly, for the Inefficient Sorting factor. Two patterns of performance characterized the three patient groups: the schizophrenic group and frontal lobe group had the highest Perseveration factor scores, whereas the alcoholic group had the highest Inefficient Sorting scores; the Nonperseverative Errors factor showed no significant group differences. Construct validity of these factors involved assessing, in all but the frontal group, the degree of overlap (convergent validity) and separation ( \*\*\*discriminant\*\*\* validity) of each WCST factor with scores from tests of other cognitive functions. The convergent and \*\*\*discriminant\*\*\* validity of the Perseveration factor, but not the remaining two factors, received support only within the group of schizophrenic patients.  
 L9 ANSWER 4 OF 4 MEDLINE on STN  
 AN 92231250 MEDLINE  
 DN PubMed ID: 1809056

TI Statistical tools in the clinical laboratory.  
AU Chieccio A; Bo A  
CS Servizio di Fisica Sanitaria, Ospedale Mauriziano, Torino.  
SO Annali dell'Istituto superiore di sanità, \*\*\* (1991) \*\*\* 27 (3) 377-84.  
Ref: 17  
CY Italy  
DT Journal; Article; (JOURNAL ARTICLE)  
    \*\*\*General Review; (REVIEW)\*\*\*  
    (REVIEW, TUTORIAL)  
LA English  
FS Priority Journals  
EM 199205  
ED Entered STN: 19920607  
Last Updated on STN: 19980206  
Entered Medline: 19920519  
AB Method evaluation, control of data and transformation of laboratory results into diagnoses all involve a decision step. A survey of the statistical tools available to organize the information and check the congruity of decision making is provided is focused on: (a) the use of classical statistical tools (including computer based simulation and replication techniques) which enable theoretical distributions to be obtained and their optimal limits to be defined for classification purposes; (b) the analysis of multivariate distributions, which evidences the relationships among the variables involved, whatever they might be: e.g. results obtained on the same specimens with different methods (in test evaluation), different laboratory data related to the same pathophysiological situations (in making diagnoses), etc. As for the latter, the most common techniques of statistical analysis of data ( \*\*\*discriminant\*\*\* and cluster analysis, \*\*\*principal\*\*\* \*\*\*components\*\*\* \*\*\*analysis\*\*\* ) are also illustrated by general examples.

=> d his

(FILE 'HOME' ENTERED AT 16:21:01 ON 11 APR 2005)

FILE 'MEDLINE, BIOSIS' ENTERED AT 16:21:19 ON 11 APR 2005  
L1 92800 S (LOGISTIC REGRESSION OR DISCRIMINANT)  
L2 1435 S L1 AND (PRINCIPAL COMPONENT ANALYSIS)  
L3 915 S L2 AND PY<2001  
L4 117 S L2 AND LOGISTIC REGRESSION  
L5 1 S L4 AND REVIEW/DT  
L6 6 S L4 AND (EXPRESSION OR ARRAY OR MICROARRAY)  
L7 4 DUPLICATE REMOVE L6 (2 DUPLICATES REMOVED)  
L8 780 DUPLICATE REMOVE L3 (135 DUPLICATES REMOVED)  
L9 4 S L8 AND REVIEW/DT

=> s 18 and (array or microarray)  
L10 4 L8 AND (ARRAY OR MICROARRAY)

=> d 1-4 bib ab

L10 ANSWER 1 OF 4 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 1999:507404 BIOSIS  
DN PREV199900507404  
TI Does habitat-specific variation in trematode infection risks influence habitat distribution of two closely related freshwater snails?.  
AU Wullschleger, Esther; Jokela, Jukka [Reprint author]  
CS Experimental Ecology, ETH-Zurich, ETH-Zentrum NW, CH-8092, Zurich, Switzerland  
SO Oecologia (Berlin), (Oct., 1999) Vol. 121, No. 1, pp. 32-38. print.  
CODEN: OECOBX. ISSN: 0029-8549.  
DT Article  
LA English  
ED Entered STN: 3 Dec 1999  
Last Updated on STN: 3 Dec 1999  
AB Parasitism may be an important factor determining the geographic distribution of closely related species. A habitat-specific risk of parasitism may lead to exclusion of susceptible host types from parasite-rich environments, and promote speciation if it leads to reproductive isolation between susceptible and resistant types. We surveyed populations of the freshwater snail *Lymnaea peregra* for differences in habitat distribution and trematode parasitism between its

two distinct shell morphs, *L. ovata* and *L. peregra*. We surveyed 58 populations (43 *L. ovata*, 15 *L. peregra*). At each location we recorded an \*\*\*array\*\*\* of habitat characteristics that were summarized using a nonlinear \*\*\*principal\*\*\* \*\*\*components\*\*\* \*\*\*analysis\*\*\*. This yielded two orthogonal habitat score variables. \*\*\*Discriminant\*\*\* analysis with these habitat dimensions indicated that the snail morphs differed in their habitat distribution. *L. ovata* preferred larger, more permanent natural habitats surrounded by forests, while *L. peregra* was found more often at a higher altitude, in nonpermanent habitats, often surrounded by meadows. The snails were parasitized by four cercarial types of castrating trematodes. The morphs had a similar prevalence of infection by each of the parasite types, with one exception: monostomid cercariae were found at a higher prevalence in *L. ovata* than in *L. peregra*. However, monostomes were rare parasites, and the difference in prevalence of infection was not significant when only populations with monostomes were compared. Our results indicate that variation in the overall prevalence of infection seems to be independent of snail morph, and do not support the idea that a difference in the rate of parasitism might explain differences in the habitat distribution of these snail morphs.

L10 ANSWER 2 OF 4 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 AN 1997:452888 BIOSIS  
 DN PREV199799752091  
 TI Differentiation of wine vinegars based on phenolic composition.  
 AU Garcia-Parrilla, M. Carmen; Gonzelez, Gustavo A.; Heredia, Francisco J.; Troncoso, Ana M. [Reprint author]  
 CS Area Nutricion Bromatol., Fac. Farmacia, Universidad Sevilla, C/P. Garcia Gonzalez s/n, E-41012 Sevilla, Spain  
 SO Journal of Agricultural and Food Chemistry, (1997) Vol. 45, No. 9, pp. 3487-3492.  
 CODEN: JAFCAU. ISSN: 0021-8561.  
 DT Article  
 LA English  
 ED Entered STN: 27 Oct 1997  
 Last Updated on STN: 27 Oct 1997  
 AB Phenolic composition of 92 wine vinegars produced from different wines from the south of Spain (Jerez, Montilla, El Condado) is determined by HPLC with diode \*\*\*array\*\*\* detection. Pattern recognition techniques were applied to distinguish between different methods of elaboration (slow traditional methods with surface culture or quick methods carried out in bioreactors with submerged culture) or wines employed as substrate. Multivariate analysis of data includes \*\*\*principal\*\*\* \*\*\*component\*\*\* \*\*\*analysis\*\*\*, cluster analysis, and linear \*\*\*discriminant\*\*\* analysis (LDA) as well as artificial neural networks trained by back-propagation (BPANN). The classification depending on the acetification process leads to good recalling rates in both LDA (mean = 92.5) and BPANN (mean = 99.6). With respect to the classification on the basis of the geographical origin, the obtained recalling rates were 88.8 for LDA and of 96.5 for BPANN (mean values).

L10 ANSWER 3 OF 4 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 AN 1993:524163 BIOSIS  
 DN PREV199396137570  
 TI Separate species or polymorphism: A recurring problem in *Kapala* (Hymenoptera: Eucharitidae).  
 AU Heraty, John M. [Reprint author]; Woolley, James B.  
 CS Biological Resources Div., CLBRR, Agriculture Can., K.W. Neatby Bldg., C.E.F., Ottawa, ON K1A 0C6, Canada  
 SO Annals of the Entomological Society of America, (1993) Vol. 86, No. 5, pp. 517-531.  
 CODEN: AESAAI. ISSN: 0013-8746.  
 DT Article  
 LA English  
 ED Entered STN: 19 Nov 1993  
 Last Updated on STN: 19 Nov 1993  
 AB Two species of *Kapala* known from northern South America and Central America are almost always collected in sympatry. A small percentage of the specimens are intermediate in some character states and thus cannot be assigned to one or the other species. To examine the hypothesis that samples represented a continuous \*\*\*array\*\*\* of morphotypes, the phenetic separation of the two species was analyzed using \*\*\*principal\*\*\* \*\*\*components\*\*\* \*\*\*analysis\*\*\* and canonical variates analysis. Clear separation of species and of geographical populations in Trinidad and Ecuador was found based on the first and

second canonical variates, respectively. These \*\*\*discriminant\*\*\* functions were applied to a different set of individuals to determine if season or locality in a geographical area had consistent effects on morphology. Although morphometric analysis suggests a clear separation of the two species, a high coincidence of collections suggests a phenotypic polymorphism within one species. Descriptive notes are provided for *Kapala iridicolor* (Cameron), new combination (*Lirata iridicolor*), and *Kapala sulcifacies* (Cameron), new combination (*Lirata sulcifacies*). *Lirata fulvicornis* Cameron and *Lirata nigriventris* Cameron are proposed as new synonymies under *Kapala sulcifacies*.

L10 ANSWER 4 OF 4 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 AN 1992:278357 BIOSIS  
 DN PREV199294003007; BA94:3007  
 TI LANDSAT IDENTIFICATION OF AMBLYOMMA-VARIEGATUM ACARI IXODIDAE HABITATS IN GUADELOUPE.  
 AU HUGH-JONES M [Reprint author]; BARRE N; NELSON G; WEHNES K; WARNER J; GARVIN J; GARRIS G  
 CS DEP EPIDEMIOLOGY COMMUNITY HEALTH, SCH VETERINARY MED, LOUISIANA STATE UNIV, BATON ROUGE, LA 70803, USA  
 SO Remote Sensing of Environment, (1992) Vol. 40, No. 1, pp. 43-55.  
 CODEN: RSEEA7. ISSN: 0034-4257.  
 DT Article  
 FS BA  
 LA ENGLISH  
 ED Entered STN: 10 Jun 1992  
 Last Updated on STN: 10 Jun 1992  
 AB The objective of this study in 1986-1987 was to determine whether it was possible to remotely identify the specific habitat or habitats of the African bont tick, *Amblyomma variegatum*, using Landsat-TM imagery data. An unsupervised classification of the April 1986 image was carried out using LAS KMEANS and SPCRT. The predictability of the landcover classes was determined by visiting random preselected sites within wetlands, woodlands, canefields, and grazing. On a second visit adult ticks were counted in over 103 herds and the habitats recorded. \*\*\*Discriminant\*\*\* analysis indicated that there were a limited number of tick habitats. The tick counts for the herds within these habitats indicate that each habitat probably has a characteristic tick density. The visible farms in Grande Terre, representing four habitats, were then compared with the landcover classes found in a 5 .times. 5 pixel \*\*\*array\*\*\* at each farm site in the classified image. The habitats could be separated using \*\*\*principal\*\*\* \*\*\*component\*\*\* \*\*\*analysis\*\*\*. Divisive clustering analysis was applied to the band values and derived indices for a similar sized \*\*\*array\*\*\* for each farm site visible in the original unclassified image of Guadeloupe. This analysis clustered the sites by large and small variance of band values, and by vegetation and moisture indices. Herds in heterogeneous sites with large variances had more ticks than those in homogeneous or low variance sites. Within the heterogeneous sites, those with high vegetation and moisture indices had more ticks than those with low values.

=>

---Logging off of STN---

=>

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COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
28.79	29.00

STN INTERNATIONAL LOGOFF AT 16:37:00 ON 11 APR 2005

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NEWS 2 "Ask CAS" for self-help around the clock  
NEWS 3 FEB 25 CA/CAPLUS - Russian Agency for Patents and Trademarks (ROSPATENT) added to list of core patent offices covered  
NEWS 4 FEB 28 PATDPAFULL - New display fields provide for legal status data from INPADOC  
NEWS 5 FEB 28 BABS - Current-awareness alerts (SDIs) available  
NEWS 6 FEB 28 MEDLINE/LMEDLINE reloaded  
NEWS 7 MAR 02 GBFULL: New full-text patent database on STN  
NEWS 8 MAR 03 REGISTRY/ZREGISTRY - Sequence annotations enhanced  
NEWS 9 MAR 03 MEDLINE file segment of TOXCENTER reloaded  
NEWS 10 MAR 22 KOREPAT now updated monthly; patent information enhanced  
NEWS 11 MAR 22 Original IDE display format returns to REGISTRY/ZREGISTRY  
NEWS 12 MAR 22 PATDPASPC - New patent database available  
NEWS 13 MAR 22 REGISTRY/ZREGISTRY enhanced with experimental property tags  
NEWS 14 APR 04 EPFULL enhanced with additional patent information and new fields  
NEWS 15 APR 04 EMBASE - Database reloaded and enhanced  
  
NEWS EXPRESS JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005  
  
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NEWS INTER General Internet Information  
NEWS LOGIN Welcome Banner and News Items  
NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
NEWS WWW CAS World Wide Web Site (general information)

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=> file .pub  
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SINCE FILE ENTRY	TOTAL SESSION
0.21	0.21

FILE 'MEDLINE' ENTERED AT 17:23:28 ON 11 APR 2005

FILE 'BIOSIS' ENTERED AT 17:23:28 ON 11 APR 2005  
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=> s (logistic regression and discriminant analysis)  
L1 393 (LOGISTIC REGRESSION AND DISCRIMINANT ANALYSIS)

=> s 11 and py<2001  
L2 264 L1 AND PY<2001

=> s 12 and (gene or expression or microarray)  
L3 3 L2 AND (GENE OR EXPRESSION OR MICROARRAY)

=> duplicate remove 13  
DUPLICATE PREFERENCE IS 'MEDLINE, BIOSIS'  
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n  
PROCESSING COMPLETED FOR L3  
L4 3 DUPLICATE REMOVE L3 (0 DUPLICATES REMOVED)

=> d 1-3 bib bab  
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REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):bib ab

L4 ANSWER 1 OF 3 MEDLINE on STN  
AN 1999298512 MEDLINE  
DN PubMed ID: 10370374  
TI Correlation of thymic pathology with HLA in myasthenia gravis.  
AU Machens A; Loliger C; Pichlmeier U; Emskotter T; Busch C; Izwicki J R  
CS Department of Surgery, University of Hamburg, Germany.  
SO Clinical immunology (Orlando, Fla.), (1999 Jun) 91 (3) 296-301.  
Journal code: 100883537. ISSN: 1521-6616.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 199906  
ED Entered STN: 19990714  
Last Updated on STN: 19990714  
Entered Medline: 19990625  
AB The aim of this study was to investigate associations between thymic pathology and HLA in myasthenia gravis. HLA typing was performed in 95 of 125 Caucasian patients who underwent transsternal thymectomy for myasthenia gravis between 1976 and 1995. Multiple comparison procedures applied within each HLA locus demonstrated significant correlations between the ancestral suprhaplotype A1 B8 DRB1\*0301 DRB3\*0101 DQA1\*0501 and thymic hyperplasia and between HLA-A24 and thymoma. A weaker association was found between A3 and thymic atrophy and thymolipoma. On logistic **discriminant analysis**, HLA-B8 (P = 0.001) and HLA-A3 (P = 0.028) were identified as the only significant classifiers to jointly provide a good discriminator between the thymic pathologies. When the suitability of HLA for detection of thymoma was examined in a second **logistic regression** analysis, both HLA-A24 (OR 9.7; 95% CI [1.6, 73.7]) and HLA-B8 (OR 0.1; 95% CI [0.0, 0.5]) were significant predictive factors. The above correlations between thymic pathology and HLA-A3, HLA-A24, and HLA-B8 (but not MHC class II alleles) suggest an involvement of MHC class I restricted T cells in myasthenic autoimmunity that may partially be reflected by thymic pathology.

L4 ANSWER 2 OF 3 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
AN 1993:142367 BIOSIS

DN PREV199395075167  
TI Characterizing the effect of matching using linear propensity score methods with normal distributions.  
AU Rubin, Donald B. [Reprint author]; Thomas, Neal  
CS Dep. Statistics, Harvard Univ., 1 Oxford Street, Cambridge, Massachusetts 02138, USA  
SO Biometrika, (1992) Vol. 79, No. 4, pp. 797-809.  
CODEN: BIOMKX. ISSN: 0006-3444.  
DT Article  
LA English  
ED Entered STN: 16 Mar 1993  
Last Updated on STN: 16 Mar 1993  
AB Matched sampling is a standard technique for controlling bias in observational studies due to specific covariates. Since Rosenbaum and Rubin (1983), multivariate matching methods based on estimated propensity scores have been used with increased frequency in medical, educational, and sociological applications. We obtain analytic **expressions** for the effect of matching using linear propensity score methods with normal distributions. These **expressions** cover cases where the propensity score is either known, or estimated using either **discriminant analysis** or **logistic regression**, as is typically done in current practice. The results show that matching using estimated propensity scores not only reduces bias along the population propensity score, but also controls variation of components orthogonal to it. Matching on estimated rather than population propensity scores can therefore lead to relatively large variance reduction, as much as a factor of two in common matching settings where close matches are possible. Approximations are given for the magnitude of this variance reduction, which can be computed using estimates obtained from the matching pools. Related **expressions** for bias reduction are also presented which suggest that, in difficult matching situations, the use of population scores leads to greater bias reduction than the use of estimated scores.  
L4 ANSWER 3 OF 3 MEDLINE on STN  
AN 88249031 MEDLINE  
DN PubMed ID: 3289149  
TI HLA-DR2, a marker for class I antigen sensitization.  
AU Kreisler J M; Rementeria M C; de Pablo R; Moreno M E  
CS Department of Immunology, Clinica Puerta de Hierro, Madrid, Spain.  
SO Transplantation, (1988 Jun) 45 (6) 1071-4.  
Journal code: 0132144. ISSN: 0041-1337.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 198807  
ED Entered STN: 19900308  
Last Updated on STN: 19900308  
Entered Medline: 19880718  
AB After analysis of 423 hemodialysis patients in a transfusion program and 461 cadaver-donor renal transplants, we found that HLA-DR2 frequency was significantly higher in the responder (36%) than in the nonresponder patient group (19%), according to the percentage of PRA (panel reactive antibodies). Among DR2+ patients, the percentage of hypersensitized patients was twice that of DR2- patients. Graft survival curves in cadaver-donor renal transplants indicated a significantly lower survival when recipients were DR2+, even in recipient-donor pairs identical for class II antigens but mismatched for class I antigens. The prognostic probability of low response to transfusions by a stepwise **logistic regression** analysis showed the influence of sex and DR2 phenotype. By multivariate **discriminant analysis**, we found that the DR2 phenotype was one of the most influential transfusion sensitization risk factors. Our preliminary conclusion is that DR2 can be

related to immune responsiveness to class I antigens.

=> d his

(FILE 'HOME' ENTERED AT 17:23:18 ON 11 APR 2005)

FILE 'MEDLINE, BIOSIS' ENTERED AT 17:23:28 ON 11 APR 2005  
L1 393 S (LOGISTIC REGRESSION AND DISCRIMINANT ANALYSIS)  
L2 264 S L1 AND PY<2001  
L3 3 S L2 AND (GENE OR EXPRESSION OR MICROARRAY)  
L4 3 DUPLICATE REMOVE L3 (0 DUPLICATES REMOVED)

=> s l2 and (gene or microarray)  
L5 2 L2 AND (GENE OR MICROARRAY)

=> d bib 1-2

L5 ANSWER 1 OF 2 MEDLINE on STN  
AN 1999298512 MEDLINE  
DN PubMed ID: 10370374  
TI Correlation of thymic pathology with HLA in myasthenia gravis.  
AU Machens A; Loliger C; Pichlmeier U; Emskotter T; Busch C; Izwicki J R  
CS Department of Surgery, University of Hamburg, Germany.  
SO Clinical immunology (Orlando, Fla.), (1999 Jun) 91 (3) 296-301.  
Journal code: 100883537. ISSN: 1521-6616.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 199906  
ED Entered STN: 19990714  
Last Updated on STN: 19990714  
Entered Medline: 19990625

L5 ANSWER 2 OF 2 MEDLINE on STN  
AN 88249031 MEDLINE  
DN PubMed ID: 3289149  
TI HLA-DR2, a marker for class I antigen sensitization.  
AU Kreisler J M; Rementeria M C; de Pablo R; Moreno M E  
CS Department of Immunology, Clinica Puerta de Hierro, Madrid, Spain.  
SO Transplantation, (1988 Jun) 45 (6) 1071-4.  
Journal code: 0132144. ISSN: 0041-1337.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 198807  
ED Entered STN: 19900308  
Last Updated on STN: 19900308  
Entered Medline: 19880718

=> s l2 and review/dt  
L6 8 L2 AND REVIEW/DT

=> d 1-8 bib ab

L6 ANSWER 1 OF 8 MEDLINE on STN  
AN 2000446579 MEDLINE  
DN PubMed ID: 10997208  
TI Ticks and tick-borne disease systems in space and from space.  
AU Randolph S E  
SO Advances in parasitology, (2000) 47 217-43. Ref: 80

CY Journal code: 0370435. ISSN: 0065-308X.  
CY ENGLAND: United Kingdom  
DT Journal; Article; (JOURNAL ARTICLE)  
    General Review; (REVIEW)  
    (REVIEW, TUTORIAL)  
LA English  
FS Priority Journals  
EM 200102  
ED Entered STN: 20010322  
Last Updated on STN: 20010322  
Entered Medline: 20010208  
AB Analyses within geographical information systems (GISs) indicate that small- and large-scale ranges of hard tick species (Ixodidae) are determined more by climate and vegetation than by host-related factors. Spatial distributions of ticks may therefore be analysed by statistical methods that seek correlations between known tick presence/absence and ground- or remotely-sensed (RS) environmental factors. In this way, local habitats of Amblyomma variegatum in the Caribbean and Ixodes ricinus in Europe have been mapped using Landsat RS imagery, while regional and continental distributions of African and temperate tick species have been predicted using multi-temporal information from the National Oceanic and Atmospheric Administration-Advanced Very High Resolution Radiometer (NOAA-AVHRR) imagery. These studies illustrate ways of maximizing statistical accuracy, whose interpretation is then discussed in a biological framework. Methods such as **discriminant analysis** are biologically transparent and interpretable, while others, such as **logistic regression** and tree-based classifications, are less so. Furthermore, the most consistently significant variable for predicting tick distributions, the RS Normalized Difference Vegetation Index (NDVI), has a sound biological basis in that it is related to moisture availability to free-living ticks and correlated with tick mortality rates. The development of biological process-based models for predicting the spatial dynamics of ticks is a top priority, especially as the risk of tick-borne infections is commonly related not simply to the vector's density, but to its seasonal population dynamics. Nevertheless, using statistical pattern-matching, the combination of RS temperature indices and NDVI successfully predicts certain temporal features essential for the transmission of tick-borne encephalitis virus, which translate into a spatial pattern of disease foci on a continental scale.  
L6 ANSWER 2 OF 8 MEDLINE on STN  
AN 2000062087 MEDLINE  
DN PubMed ID: 10596951  
TI Artificial neural networks in laboratory medicine and medical outcome prediction.  
AU Tafeit E; Reibnegger G  
CS Institute of Medical Chemistry, Karl Franzens University, Graz, Austria.  
SO Clinical chemistry and laboratory medicine : CCLM / FESCC, (1999 Sep) 37 (9) 845-53. Ref: 35  
Journal code: 9806306. ISSN: 1434-6621.  
CY GERMANY: Germany, Federal Republic of  
DT Journal; Article; (JOURNAL ARTICLE)  
    General Review; (REVIEW)  
    (REVIEW, TUTORIAL)  
LA English  
FS Priority Journals  
EM 200001  
ED Entered STN: 20000124  
Last Updated on STN: 20000124  
Entered Medline: 20000111  
AB Since the early nineties the number of scientific papers reporting on artificial neural network (ANN) applications in medicine has been quickly increasing. In the present paper, we describe in some detail the

architecture of network types used most frequently in ANN applications in the broad field of laboratory medicine and clinical chemistry, present a technique-structured review about the recent ANN applications in the field, and give information about the improvements of available ANN software packages. ANN applications are divided into two main classes: supervised and unsupervised methods. Most of the described supervised applications belong to the fields of medical diagnosis ( $n = 7$ ) and outcome prediction ( $n = 9$ ). Laboratory and clinical data are presented to multilayer feed-forward ANNs which are trained by the back propagation algorithm. Results are often better than those of traditional techniques such as linear **discriminant analysis**, classification and regression trees (CART), Cox regression analysis, **logistic regression**, clinical judgement or expert systems. Unsupervised ANN applications provide the ability of reducing the dimensionality of a dataset. Low-dimensional plots can be generated and visually understood and compared. Results are very similar to that of cluster analysis and factor analysis. The ability of Kohonen's self-organizing maps to generate 2D maps of molecule surface properties was successfully applied in drug design.

L6 ANSWER 3 OF 8 MEDLINE on STN  
AN 96389643 MEDLINE  
DN PubMed ID: 8796937  
TI Regression analysis and multivariate analysis.  
AU Duleba A J; Olive D L  
CS Department of Obstetrics & Gynaecology, Yale University School of Medicine, New Haven, Connecticut 06520-8063, USA.  
SO Seminars in reproductive endocrinology, (1996 May) 14 (2) 139-53. Ref: 10  
Journal code: 8308354. ISSN: 0734-8630.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)  
(REVIEW, TUTORIAL)  
LA English  
FS Priority Journals  
EM 199611  
ED Entered STN: 19961219  
Last Updated on STN: 19961219  
Entered Medline: 19961114  
AB Proper evaluation of data does not necessarily require the use of advanced statistical methods; however, such advanced tools offer the researcher the freedom to evaluate more complex hypotheses. This overview of regression analysis and multivariate statistics describes general concepts. Basic definitions and conventions are reviewed. The types of regression analysis are then discussed, including simple regression, multiple regression, multivariate multiple regression, and **logistic regression**. The various steps required to perform these analyses are described, and the advantages and disadvantages of each is detailed.  
L6 ANSWER 4 OF 8 MEDLINE on STN  
AN 96143473 MEDLINE  
DN PubMed ID: 8561077  
TI Multivariate statistical analysis for pathologist. Part I, The logistic model.  
AU Vollmer R T  
CS Department of Laboratory Medicine, VA Medical Center, Durham, NC 27705, USA.  
SO American journal of clinical pathology, (1996 Jan) 105 (1) 115-26. Ref: 16  
Journal code: 0370470. ISSN: 0002-9173.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)

(REVIEW, TUTORIAL)  
LA English  
FS Abridged Index Medicus Journals; Priority Journals  
EM 199602  
ED Entered STN: 19960312  
Last Updated on STN: 19960312  
Entered Medline: 19960223  
AB This paper reviews concepts of multivariate statistical modeling via the logistic regression model, which has become very popular for modeling the relationship between a positive clinical outcome and a variety of predictor variables. The process is illustrated using a composite of data from three large prostate specific antigen based screening studies of prostate cancer.

L6 ANSWER 5 OF 8 MEDLINE on STN  
AN 94277137 MEDLINE  
DN PubMed ID: 8008012  
TI Diagnostic tests: a statistical review.  
AU Schulzer M  
CS Department of Medicine, University of British Columbia, Vancouver, Canada.  
SO Muscle & nerve, (1994 Jul) 17 (7) 815-9. Ref: 12  
Journal code: 7803146. ISSN: 0148-639X.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)  
(REVIEW, TUTORIAL)  
LA English  
FS Priority Journals  
EM 199407  
ED Entered STN: 19940729  
Last Updated on STN: 19940729  
Entered Medline: 19940719  
AB Common measures of the accuracy of diagnostic tests are reviewed. It is shown that the actual performance (predictive value) of these tests depends not only on their sensitivity and specificity, but also on the prevalence of the disease in the population tested (Bayes' theorem). The effect of an inaccurate "gold standard" on the calibration of a new diagnostic test is discussed. Receiver operating characteristic (ROC) curves are introduced as a tool for selecting an optimal cutpoint for a test, and for comparing different tests. Schemes are given for combining tests to improve their accuracy. When multiple continuous measurements are available, methods of discriminant analysis (and logistic regression) are shown to provide measurement combinations with improved accuracy. Examples and key references are provided.

L6 ANSWER 6 OF 8 MEDLINE on STN  
AN 94084459 MEDLINE  
DN PubMed ID: 1341652  
TI Statistical methods in diagnosis.  
AU Hand D J  
CS Department of Statistics, Faculty of Mathematics, Open University, Milton Keynes, UK.  
SO Statistical methods in medical research, (1992) 1 (1) 49-67.  
Ref: 68  
Journal code: 9212457. ISSN: 0962-2802.  
CY ENGLAND: United Kingdom  
DT Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)  
LA English  
FS Priority Journals  
EM 199401  
ED Entered STN: 19940209  
Last Updated on STN: 20020125

AB Entered Medline: 19940127

AB Motivations are presented for exploring formal statistical methods for use in medical diagnosis and the advantages and disadvantages are discussed. A brief review is presented of classical linear **discriminant analysis**, quadratic **discriminant analysis**, **logistic regression**, nearest neighbour and kernel methods, recursive partitioning methods, the independence model, regularized **discriminant analysis**, structured conditional probability distributions, methods for categorical data, and other methods. Criteria on which a choice might be made are presented and methods for assessing diagnostic performance are outlined. Particular applications of screening and chromosome analysis are used as illustrations and available software is described.

L6 ANSWER 7 OF 8 MEDLINE on STN

AN 91308296 MEDLINE

DN PubMed ID: 2100560

TI Multivariate techniques to assess laboratory tests in cancer patients.

AU Winkel P; Statland B E

CS University Hospital of Copenhagen, Denmark.

SO Immunology series, (1990) 53 27-38. Ref: 13  
Journal code: 0404721. ISSN: 0092-6019.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)  
(REVIEW, TUTORIAL)

LA English

FS Priority Journals

EM 199108

ED Entered STN: 19910913  
Last Updated on STN: 19980206  
Entered Medline: 19910829

AB In this chapter the application of multivariate techniques for the assessment of laboratory tests in cancer patients has been reviewed. We emphasize that the transformation of laboratory test values into just two categories (normal or abnormal) may entail a considerable loss of information. For instance, correlation between two laboratory tests that may be important for differentiating among various clinical categories of patients may disappear when this procedure is used. When only a single set of laboratory results measured in the same specimen is available for a given patient, we must compare these values to those obtained from other patients or healthy subjects to make inferences about the patient on the basis of the laboratory results. Thus, the analysis of the data must be group based. **Discriminant analysis**, **logistic regression** analysis, and survival analysis based on Cox's regression model are the techniques most often used in this situation. By contrast, when previous results are available from the same patient we may compare his or her present values to those previously obtained when we want to make inferences about the patient. Our objective is to make a prediction about the time that will elapse until some specified event (death or recurrence of disease) occurs. Two models that have been applied in this situation--the Markov chain and the autoregressive time series model--were reviewed and examples of specific medical applications presented.

L6 ANSWER 8 OF 8 MEDLINE on STN

AN 88311125 MEDLINE

DN PubMed ID: 3331577

TI Statistical methods in medical diagnosis.

AU Begg C B

CS Department of Biostatistics, Harvard University, Boston, Massachusetts.

NC CA-31247 (NCI)

SO Critical reviews in medical informatics, (1986) 1 (1) 1-22.  
Ref: 130

Journal code: 8712374. ISSN: 0882-0503.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
    General Review; (REVIEW)  
    (REVIEW, TUTORIAL)  
LA English  
FS Priority Journals  
EM 198809  
ED Entered STN: 19900308  
Last Updated on STN: 19970203  
Entered Medline: 19880929  
AB A review of statistical methods in medical diagnosis is presented. Research has focused on three distinct tasks: classification of subjects into probable diagnostic categories on the basis of presenting clinical indicators (**discriminant analysis**), assessment of diagnostic test characteristics, and relation of diagnostic testing to subsequent patient management. Although many sophisticated models have been developed for **discriminant analysis**, recent empirical comparisons indicate that standard methods such as linear discrimination and **logistic regression** work very well. More research is needed to overcome practical difficulties that are not accommodated in the conventional assumptions. Research on the assessment of diagnostic tests has been oriented more toward selection biases and practical problems. There is a need to develop generalized models for the problem of differential diagnosis. The relation of testing to subsequent management of the patient is a topic that has only recently been explored. It represents an important task in the cost-effective management of health resources.